

## **REMARKS**

The present response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

Claims 6, 10, 16, 20, 26, 30-42 are pending in this case. Claims 26, 30, 39-42 have been rejected under 35 U.S.C. § 101. Claims 6, 16, 26, 31-33, 35-37, 39-40 have been rejected under the judicially created doctrine of obviousness-type double patenting. Claims 6, 10, 16, 20, 26, 30-33, 35-37, 39-41 have been rejected under 35 U.S.C. § 102(e). Independent claims 6, 16, 26 and dependent claims 10, 20, 30-33, 35-37, 39-42 have been amended. New claims 43-54 have been added.

With respect to the Examiner's 35 U.S.C. § 102(e) rejections, Applicant has reviewed the cited art and respectfully submits that the art fails to disclose or suggest the Applicant's claimed invention. Therefore, Applicant respectfully traverses and requests favorable reconsideration.

### **Formal Drawings**

Applicant submits with this Response, a full set of formal drawings for entry to replace the informal drawings filed with the initial application, including 33 sheets of Figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 10A, 10B, 11, 12A, 12B, 13, 14, 15, 16A, 16B, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28A, 28B, 29, 30.

### **Response to 35 U.S.C. § 101 Rejection**

The Examiner rejected claims 26, 30, 39-42 under 35 U.S.C. § 101 because the claims invention is directed to non-statutory subject matter. The Examiner indicated that claims 26, 30, 39-42 are directed towards "a computer program" but do not necessarily invoke "a computer readable medium" as required to meet 35 U.S.C. § 101.

In response, Applicant has amended independent claim 26 and added new independent claim 43 directed towards a computer program product comprising a computer useable medium having several computer readable program code means embodied therein reciting functional material. Since the functional material is embodied on a computer readable medium it is therefore statutory and the claim is directed to statutory subject matter.

Applicant believes that claims 26, 30, 39-42 and new claims 43-54 overcome the Examiner's rejection based on § 101 grounds. The Examiner is respectfully requested to withdraw the § 101 rejection.

### **Response to Double Patenting Rejection**

The Examiner rejected claims 6, 16, 26, 31-33, 35-37, 39-40 under the judicially created doctrine of obviousness-type double patenting as being un patentable over claims 1-42 of U.S. Patent No. 6,314,452 (referred to as the '452 patent hereinafter). The Examiner indicated that although the claims are not identical, they are not patently distinct from each other.

In response, Applicant has amended independent claims 6, 16, 26 and dependent claims 31-33, 35-37, 39-40. It is believed that the amended claims are now patently distinct from the conflicting claims of the '452 patent since they cover different subject matter than claims 6, 16, 26 and new claim 43 of the instant application.

Applicant believes that claims 6, 16, 26, 31-33, 35-37, 39-40 and new claims 43-54 overcome the Examiner's rejection based on obviousness-type double patenting grounds. The Examiner is respectfully requested to withdraw the obviousness-type double patenting rejection.

### **Response to 35 U.S.C. § 102(e) Rejections**

The Examiner rejected claims 6, 10, 16, 20, 26, 30-33, 35-37, 39-41 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,711,297 ("Chang et al."). Applicant respectfully submits that the prior art fails to disclose or suggest at least a server computer operative to apply a three dimensional wavelet transform to an image sequence and to progressively transmit three dimensional subband coefficient data blocks to a client computer. Therefore, Applicant respectfully traverses the rejections and request favorable reconsideration.

Applicant has reviewed the cited art and respectfully submits that the art fails to disclose or suggest the Applicant's claimed invention, and fails to teach each and every element and limitation of the claims rejected herein. Therefore Applicant respectfully traverses the rejections and requests favorable reconsideration.

While continuing to traverse the Examiner's rejections, Applicant, in order to expedite the prosecution, has chosen to clarify and emphasize the crucial distinctions between the present invention and the devices of the patents cited by the Examiner. Specifically, representative claim 6 has been amended to include a system for transmitting a sequence of digital images over a

communication network comprising a storage device for storing a sequence of digital images, a client computer coupled to the communication network, the client computer operative to generate and transmit across the communication network a request for interaction with the image sequence stored on the image storage device, the request for interaction comprising a request list specifying data blocks for rendering a region of interest (ROI) within the image sequence and a server computer coupled to the communication network and the image storage device, the server computer adapted to perform the steps of preprocessing the image sequence through a **three dimensional wavelet transform**, receiving the request list from the client computer and progressively transmitting to the client computer **three dimensional** subband coefficient data blocks corresponding to the region of interest.

Chang et al. teaches a dynamic transfer scheme for transferring data including images from a server to a client. Source data is transformed into a hierarchical representation comprising a plurality of levels of transform data, such that a level of the hierarchical representation comprises transfer data sufficient to reconstruct the source data at a resolution corresponding to the level. The server transfers transform data from a level of the hierarchical representation corresponding to the desired resolution.

It is submitted that Chang et al teaches an image transfer scheme for two-dimensional images only. Chang et al. does not teach or suggest a scheme for transferring image sequences (e.g., three-dimensional images) nor does Chang et al. teach or suggest applying a three-dimensional wavelet transform to image data.

In contrast, the image streaming system of the present invention is teaches transmitting sequences of images over a communications network. A sequence of images may be a three-dimensional image, a sequence of two-dimensional images, etc. An example of a sequence of two-dimensional images is video sequences such as ultrasound or other medical related imaging.

The three-dimensional wavelet transform taught by the present invention is operative to find correlations between frames (i.e. of a two-dimensional image sequence) in order to improve compression of the image sequence over the communications network from the server to the client. Chang et al., however, fails to teach or suggest whatsoever any type of three dimensional wavelet transform, and thus does not anticipate the present invention. The Applicant respectfully traverses the rejections of claims 6, 10, 16, 20, 26, 30-33, 35-37, 39-41 and submits that the presently claimed invention is patently distinct over Chang et al.

It is believed that claims 6, 10, 16, 20, 26, 30-33, 35-37, 39-41 overcome the Examiner's § 102(e) rejection based on the Chang et al. reference. The Examiner is respectfully requested to withdraw the rejection based on § 102(e).

#### **New Claims**

New claims 43-54 have been added. Support for the new claims may be found throughout the specification and drawings as filed in this application. In particular, reference may be made to page 3, line 13 through page 72, line 10 and the Figures references therein. No new matter has been added.

#### **Correction of Typographical Errors**

Amendments have been made to correct grammatical and usage errors in the specification. No new matter has been added to the application by these amendments.

#### **Conclusion**

In view of the above amendments and remarks, it is respectfully submitted that independent claims 6, 16, 26 and 43 and hence dependent claims 10, 20, 30-42, 44-54 are now in condition for allowance. Prompt notice of allowance is respectfully solicited.

In light of the Amendments and the arguments set forth above, Applicant earnestly believes that they are entitled to a letters patent, and respectfully solicit the Examiner to expedite prosecution of this patent applications to issuance. Should the Examiner have any questions, the Examiner is encouraged to telephone the undersigned.

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Respectfully submitted,

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